Site Background
We will visit the Maputo wastewater treatment facility, which serves the urban areas of Maputo, treating both stormwater and raw sewage and sludge from private septic tanks. On the way to the site, we will also observe the nearby built urban environment, the city’s solid waste management.

While you are at the site, you will receive a briefing on how the facility operates. Stormwater from western and northern Maputo are collected to a drain that discharges into constructed wastewater ponds. Raw sewage and sludge from private septic tanks are also discharged to the site by truck. The ponds, predominantly vegetated with *Typha domingensis* and *Hydrocley nymphoids*, hold water to allow natural breakdown of nutrients and biosolids. The site is surrounded by vegetable farms, which are irrigated with water from the ponds. Discharge drains via a channel to the seas. No water quality monitoring is conducted at the discharge point.

Activity Scenario & Site Visit Objectives
(Note: this scenario is not an actual USAID activity, it is only for workshop purposes)

The capacity of Maputo’s stormwater drains is not sufficient to handle the intense storms Mozambique has been experiencing in the past few years.* The following news coverage is typical:
Heavy Rain, Floods Hit Maputo. AllNetAfrica 11 March 2018. 

Maputo: Heavy rains in Maputo late afternoon and early evening yesterday flooded both the city’s central ‘Baixa’ neighbourhoods and outskirts, making access roads impassable and forcing shops to close.

The scene in the capital was dramatic, as roads flooded, drainage ditches clogged and people scrambled for transport.

Many people working, strolling or shopping in the Baixa had no alternative but to dip their feet in the murky waters, while elsewhere, motorists tried unsuccessfully to manoeuvre their cars out of flooded parking lots.

A scene described in Maputo whenever heavy rain falls.”

Expectations are that intense rainfall events in Maputo will become even more common in coming years. (see draft Mozambique Climate Risk Profile included in Sourcebook).

As part of a multidonor-GoM initiative to reduce flooding incidence and impacts—largely by rehabilitating and expanding capacity of Maputo’s drainage system—USAID has committed to supporting the expansion and upgrade of Maputo’s stormwater treatment system—in particular, this facility. Engineering estimates are that a tripling of current capacity will be required.

Your team has determined that this activity will require a scoping statement, almost certainly leading to an Environmental Assessment (EA). The team also knows that a number of major questions about design of this activity remain to be settled, and is determined that the EA process inform these questions.

Therefore, you are conducting a site visit to gather more information to: (1) inform preliminary identification of the likely preferred action and its alternatives, (2) develop the TOR for the scoping statement, and (3) inform your planning for incorporating the EA findings into activity design and implementation.

Your field team includes the MEO, the COR, Mission technical experts and municipal officials

*The issue is not limited to Maputo: a January 2018 storm delivered over over 200 mm [7.8 inches] of rain in 24 hours and wind gusts of up to 85 km/h [52.8 mph] in Northern Mozambique and left 11 dead, and up to 15,000 homes destroyed). The flooding was also linked by the WHO to an outbreak of cholera due to contamination of drinking water by floodwaters and sewage, resulting from damage to infrastructure such as septic systems and health facilities.

Site visit instructions
During your site visit:

• Observe both social and environmental conditions.
• Consider how to define **purpose and need** of this activity – this must be defined in terms of reducing the risks presented by increased stormwater delivery from the drainage network rather than increasing the capacity of the facility per se.

• Consider whether simply scaling up this facility is the ONLY intervention that can achieve the purpose and need. E.g., does the existing treatment technology actually meet purpose and need for the existing volume of water treated? Might a second facility be constructed nearby, rather than expanding this one? Should treatment of sewage and stormwater be separated? Are there feasible corollary measures that could be implemented to reduce stormwater runoff in the first place?

• Think about the actions that will be entailed in each major alternative.

• Consider the environmental and social impacts of these major alternatives. (Remember to consider indirect impacts.)

• Make a sketch of the site to inform follow-on discussions when the team returns from the field

• Whether they were available or not, consider potential stakeholders that should be consulted as part of the scoping process

**Back in the classroom**

Upon return to the Hotel, your group will review observations from the field visit and:

1. Agree on a statement of purpose and need

2. Identify key design choices/alternatives for major elements of the activity

3. Develop a matrix or matrixes that allows comparison of the major environmental and social impact of these alternatives

4. Populate this matrix (matrices) with qualitative “guesstimates” of relative impacts (and relative costs, if you can)

5. Use this discussion to inform a preliminary proposed activity design (“Proposed Actions”) – i.e. which set of key design choices will you adopt, at least as a starting point? What are the primary alternatives?

6. Based on your proposed actions and your comparison matrix, identify the minimum set of environmental and social impacts that the scoping statement must address. (These are the impacts that may be significant. If impacts can obviously be eliminated as non-significant, or are inherently addressed and mitigated in the design, they need not be part of the scoping statement TOR.)

7. Specify the minimum set of stakeholders that the scoping team must engage with. Provide at least minimum guidance as to how different classes of stakeholders are to be engaged (e.g., individual interviews, small group meetings, townhalls, etc.)?

8. Identify your next steps as a design team. Make a plan for including the EA results in your project phasing.